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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,020	01/18/2001	Ji Zhang	CISCP158/3179	8083

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EXAMINER	
AN, SHAWN S	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/766,020	ZHANG ET AL.	
	Examiner	Art Unit	
	Shawn S. An	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8 and 11-31* is/are pending in the application.

4a) Of the above claim(s) *16-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,11-15 and 26-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. The request filed on 6/23/05 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/766,020 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. As per Applicants' instruction as filed on 11/16/04, claims 1, 3-4, 11, 26, 30, and 31 have been amended, and claims 2 and 9-10 have been canceled.

Response to Remarks

3. Applicants' arguments with respect to amended claims have been carefully considered but are moot in view of the new ground(s) of rejection

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-8, 11-15, and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haskell et al (5,687,095) in view of Seo et al (6,208,688 B1) and Hamilton (5,617,142).

Regarding claims 1, 3, 26-28, and 30, Haskell et al discloses a system/method/software (Fig. 6; col. 11, lines 1-4) for converting the bit rate of a compressed bitstream, the system/method/software comprising:

means for basic requantizing a first portion of the bitstream containing video data using a first re-quantization scheme; and

means for requantizing a second portion of the bitstream containing video data using a second re-quantization scheme that is computationally more demanding than the first re-quantization scheme (abs.; Fig. 1, 107; col. 10, lines 49-57; bit rate increase).

Haskell et al does not particularly disclose requantizing a first portion of the bitstream that includes a B frame using a first re-quantization scheme, and requantizing a second portion of the bitstream that includes a P or I frame using a second re-quantization scheme.

However, Seo et al teaches method of selecting a re-quantization step size and controlling a bit-rate comprising a bit rate converter which requantizes a bitstream including I and P frames by using new quantization step size (col. 3, lines 29-34).

Furthermore, Hamilton teaches method and apparatus for changing the compression level of a compressed digital signal comprising a requantization processor (Fig. 3, 60) including a selector (Fig. 5, 94) to select either requantized or original compressed signals, wherein the microprocessor (92) receives bitstream indicating whether the frame is a B, I, or P frame, and sent to the selector (col. 7, lines 18-28).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a system/method/software for converting the bit rate of a compressed bitstream as taught by Haskell et al to incorporate the Seo et al and Hamilton's teachings as above for requantizing a first portion of the bitstream that includes a B frame using a first re-quantization scheme, and requantizing a second portion of the bitstream that includes a P or I frame using a second re-quantization scheme as an efficient way to control the bit-rate.

Regarding claims 4 and 29, Haskell et al discloses means for performing motion compensated re-quantization (Fig. 7, 107).

Regarding claim 5, Haskell et al discloses determining the available bandwidth of the channel (col. 1, lines 46-48).

Regarding claim 6, Haskell et al discloses full decoding (104) and re-encoding (109) of the second portion.

Regarding claims 7 and 12-13, Haskell et al discloses changing the resolution of the second portion (Fig. 2, CIF, QCIF frames) (Note: chrominance component (U) has only half of the resolution of their luminance components) (e.g., luminance (Yn) component has 288 lines of 352 pixels and chrominance components (U, V) have144 lines of 176 pixels).

Regarding claim 8, Haskell et al discloses a frame/picture of video data (CIF picture).

Regarding claim 11, Haskell et al discloses the compressed bit stream and the portion including the P frame, wherein the P frame is the last P frame in a GOP (col. 7, lines 22-29).

Regarding claim 14, Hamilton teaches re-quantization scheme being performed in real-time (col. 3, lines 43-57).

Regarding claim 15, Haskell et al discloses monitoring load of a processor in a network device (Fig. 8).

Regarding claim 31, Haskell et al discloses an apparatus for converting the bit rate of a compressed bitstream, the apparatus comprising:

memory (Fig. 1, 111), and

a processor (107) coupled to the memory for requantizing a first portion of the bitstream including video data using a first re-quantization scheme, and requantizing a second portion of the bitstream including video data using a second re-quantization scheme that is computationally more demanding than the

first re-quantization scheme (abs.; Fig. 1, 107; col. 10, lines 49-57; bit rate increase).

Haskell et al does not particularly disclose requantizing a first portion of the bitstream that includes a B frame using a first re-quantization scheme, and requantizing a second portion of the bitstream that includes a P or I frame using a second re-quantization scheme.

However, Seo et al teaches method of selecting a re-quantization step size and controlling a bit-rate comprising a bit rate converter which requantizes a bitstream including I and P frames by using new quantization step size (col. 3, lines 29-34).

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Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a system/method/software for converting the bit rate of a compressed bitstream as taught by Haskell et al to incorporate the Seo et al and Hamilton's teachings as above for requantizing a first portion of the bitstream that includes a B frame using a first re-quantization scheme, and requantizing a second portion of the bitstream that includes a P or I frame using a second re-quantization scheme as an efficient way to control the bit-rate.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S An* whose telephone number is 571-272-7324.

7. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Please note the new fax number.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHAWN AN
PRIMARY EXAMINER

8/02/05